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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

MAILED
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GROUP 1700

Application Number: 10/679,057
Filing Date: October 03, 2003
Appellant(s): DING, NI

Gidon Stern
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 1/5/2007 and 4/23/2007 appealing from the Office action mailed 12/13/2005.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

5,843,172	Yan	12-1998
5,205,921	Shirkanzadeh	4-1993

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1, 3, 4, 6-8, 11-13, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yan (5,843,172) in view of Shirkanzadeh (5,205,921).

Yan teaches loading the pores of a metallic stent with bioactive agent by immersing the stent in a solution of the bioactive agent (abstract; col. 5, line 40).

What Yan fails to specifically teach is an electrodeposition method for loading the stent with the bioactive agent.

Shirkanzadeh teaches electrodepositing a biologically active (bioactive) agent onto porous, metal medical device implant substrates (abstract). Shirkanzadeh forms a solution of the bioactive agent, places the device into the solution with an electrode and applies current to deposit the bioactive agent onto the substrate (throughout and Example).

Since both Yan and Shirkanzadeh teach coating porous metallic medical device implants with solutions of bioactive agents and Shirkanzadeh specifically teaches the use of electrodeposition for deposition of such bioactive agents onto such substrates, Shirkanzadeh would have reasonably suggested the use of electrodeposition to deposit the coating of Yan. It would have been obvious to one of ordinary skill in the art to use the teachings of Shirkanzadeh in the method of Yan to provide Yan with a suitable method of coating metallic medical implants with bioactive agent solutions.

The stents of Yan are metal as required by claim 6.

The bioactive agent of Shirkanzadeh is positive, so the electrode would be an anode, as required by claim 3.

Heparin, a bioactive agent useful in the method of Yan and required by Applicant in claim 11, is negative, as taught by the instant specification, therefore the electrode of Shirkanzadeh's invention would be a cathode, as required by claim 3 (col. 10, line 6).

Stents are expandable and one of ordinary skill in the art would recognize that stents are commonly either self-expandable or balloon-expandable. Yan's teaching of stents would be inclusive of balloon-expandable and self-expandable stents, as required by claims 7-8. It would have been obvious to one of ordinary skill in the art to select a means of expanding the stents of Yan from the small class of means available.

Regarding claim 13, it is Examiner's position that the formation and laser-etching of a stent would yield some particulate matter. Yan appears to implant the stent immediately (col. 3, line 5).

Claim 29 is rejected for those reasons applied to claim 1.

(10) Response to Argument

The applicant argues that Shirkanzadeh does not disclose a stent or other medical device with a sidewall and openings. The examiner's position is that the Yan reference teaches this.

The applicant argues that Shirkanzadeh teaches away from the present invention because it teaches a process for depositing an adherent ceramic compound onto a prosthesis.

However, Shirkanzadeh teaches that the substrate can be porous and that the coating is deposited onto the substrate. The coating is expected to enter the pores of the "porous substrate" when deposited by electro depositing (see Abstract) and is also releasable once inserted into the body, as described below.

Applicant argues that Shirkanzadeh does not teach a releasable coating and does not teach a biologically active agent. The examiner disagrees. Shirkanzadeh teaches that calcium phosphate coatings have biological activity and that they release ions, and thus are releasable coatings (2:52-3:4).

The applicant argues that Yan teaching that its coating is adherent (2:47-67; 5:56-65) is irrelevant because Shirkanzadeh teaches its coating is not releasable. The examiner disagrees. Shirkanzadeh teaches that the ions are released from its coating (2:52-3:4).

Regarding applicant's arguments that the examiner has relied on personal knowledge that all coating are releasable, the examiner is not relying on personal knowledge, but instead is relying on both Yan (5:56-65) and Shirkanzadeh (2:52-3:4) that their coatings are releasable.

The applicant argues that here is no motivation to combine the references because the implants of the references are used in different bodily tissues and for different purposes.

Examiner disagrees.

The references taken together teach Applicant's invention for those reasons and motivations provided above. Both references teach loading porous stainless steel or titanium alloy implantable medical devices with bio-active agents in solution. The agents relied upon in Yan are desirably released into the body. Shirkanzadeh teaches that electrodeposition is useful in loading bioactive agents into conductive, porous implantable medical devices made from stainless steel or titanium alloy. Since the substrates of Yan are conductive, porous medical devices made of the same materials and must be suitable for use within the body, just as in Shirkanzadeh, Examiner relies on Shirkanzadeh to provide a suitable method of loading bio-agents on the devices of Yan. Yan's stent loaded with bio-agents would be releasable when applied by the electrodeposition method of Shirkanzadeh.

Regarding applicant's assertion that there is no reasonable expectation for success because Yan and Shirkanzadeh are directed to opposite purposes, the examiner disagrees. Both Yan and Shirkanzadeh teach releasable coatings applied onto porous surfaces.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Erma Cameron

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